

## REMARKS

### I. Introduction

Claims 1, 3 to 5, 8, 9, 12 to 14, and 17 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

### II. Objection to Claim 1

Regarding the objection to claim 1, the Examiner's attention is respectfully directed to line 27 of claim 1 as presented in the Amendment filed on September 10, 2007, which recites "a recess provided on . . ." Accordingly, withdrawal of this objection is respectfully requested.

### III. Rejection of Claims 1, 3 to 5, 8, and 9 Under 35 U.S.C. § 102(b)

Claims 1, 3 to 5, 8, and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by WO98/53229 ("Werner et al."). It is respectfully submitted that Werner et al. do not anticipate these claims for at least the following reasons.

Claim 1 relates to a brush seal for sealing a rotor with respect to a stator. As amended herein without prejudice, claim 1 recites, *inter alia*, bristles including free ends oriented toward a first one of the rotor and the stator, and a bristle housing, the bristles fastened in the bristle housing, the bristle housing press-fit in an axial space between a fastening element and a second one of the rotor and the stator, the bristle housing press-fit on the second one of the rotor and the stator against movement in a radial direction relative to the second one of the rotor and the stator, the bristle housing including a cover plate having an outer side surface arranged on a first axial side of the bristles and an axial section that extends axially from the outer side surface in an axial direction away from the bristles toward the first axial side to a free end disposed on the first axial side of the bristles, a supporting plate having an inner side surface arranged on a second axial side of the bristles opposite the first axial side, and a circumferential section that extends from the inner side surface in the axial direction from the second axial side of the bristles to the first axial side of the bristles and axially beyond the free end of the cover plate to a flanged section, the flanged section spaced apart from the free end of the cover plate and projecting radially inwardly beyond the free end of the cover plate so as to form an undercut between the flanged section, the free end, and the outer side surface,

the flanged section having a free end that does not directly contact the cover plate, the bristles being fastened in the bristle housing between the inner side surface and the outer side surface. Support for this amendment may be found, for example, at Figures 4 and 5.

Applicants respectfully submit that Werner et al. does not disclose, or even suggest a brush seal with a cover plate having an outer side surface arranged on a first axial side of bristles and an axial section that extends axially from an outer side surface in an axial direction away from the bristles to a free end, **the free end being disposed on the first axial side of the bristles**, a supporting plate having an inner side surface arranged on a second axial side of the bristles opposite the first axial side, and a circumferential section that extends from the inner side surface in the axial direction from the second axial side of the bristles to the first axial side of the bristles and axially beyond the free end of the cover plate to a flanged section, **the flanged section being spaced apart from the free end of the cover plate** and projecting radially inwardly beyond the free end of the cover plate so as to form **an undercut between the flanged section, the free end, and the outer side surface**, **the flanged section having a free end that does not directly contact the cover plate**. Therefore, it is respectfully submitted that Werner et al. do not disclose, or even suggest, all of the features recited in claim 1. Accordingly, Applicants respectfully submit that Werner et al. do not anticipate claim 1.

Claims 3 to 5, 8, and 9 ultimately depend from claim 1 and therefore include all of the features recited in claim 1. It is therefore respectfully submitted that Werner et al. do not anticipate these dependent claims for at least the same reasons set forth above in support of the patentability of claim 1.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IV. Rejection of Claims 12 and 13 Under 35 U.S.C. § 103(a)**

Claims 12 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Werner et al. and U.S. Patent No. 5,474,305 (“Flower”). It is respectfully submitted that the combination of Werner et al. and Flower does not render unpatentable these claims for at least the following reasons.

Claims 12 and 13 ultimately depend from claim 1 and therefore include all of the features recited in claim 1. As more fully set forth above, Werner et al. do

not disclose, or even suggest, all of the features recited in claim 1. Flower is not relied upon for disclosing or suggesting the features of claim 1 not disclosed or suggested by Werner et al. Indeed, Flower does not disclose, or even suggest, the features of claim 1 not disclosed or suggested by Werner et al.

In view of all of the foregoing, it is respectfully submitted that the combination of Werner et al. and Flower does not render unpatentable the present claims. Accordingly, withdrawal of the present rejection is respectfully requested.

**V. Rejection of Claim 14 Under 35 U.S.C. § 103(a)**

Claim 14 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Werner et al. and U.S. Patent No. 5,066,025 (“Hanrahan”). It is respectfully submitted that the combination of Werner et al. and Hanrahan does not render unpatentable claim 14 for at least the following reasons.

Claim 14 depends from claim 1 and therefore includes all of the features recited in claim 1. As more fully set forth above, Werner et al. do not disclose, or even suggest, all of the features recited in claim 1. Hanrahan is not relied upon for disclosing or suggesting the features of claim 1 not disclosed by Werner et al. Indeed, Hanrahan does not disclose, or even suggest, the features of claim 1 not disclosed or suggested by Werner et al.

In view of all of the foregoing, it is respectfully submitted that the combination of Werner et al. and Hanrahan does not render unpatentable claim 14. Accordingly, withdrawal of the present rejection is respectfully requested.

**VI. Rejection of Claim 17 Under 35 U.S.C. § 103(a)**

Claim 17 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Werner et al. and U.S. Patent No. 6,106,190 (“Nakamura et al.”). It is respectfully submitted that the combination of Werner et al. and Nakamura et al. does not render unpatentable claim 17 for at least the following reasons.

Claim 17 relates to a brush seal for sealing a rotor with respect to a stator. As amended herein without prejudice, claim 1 recites, *inter alia*, bristles including free ends oriented toward a first one of the rotor and the stator, and a bristle housing, the bristles fastened in the bristle housing, the bristle housing press-fit in an axial space between a fastening element and a second one of the rotor and the stator, the bristle housing press-fit on the second one of the rotor and the stator

against movement in a radial direction relative to the second one of the rotor and the stator, the bristle housing including a cover plate having an outer side surface arranged on a first axial side of the bristles and an axial section that extends axially from the outer side surface in an axial direction away from the bristles to a free end, the free end being disposed on the first axial side of the bristles, a supporting plate having an inner side surface arranged on a second axial side of the bristles opposite the first axial side, and a circumferential section that extends from the inner side surface in the axial direction from the second axial side of the bristles to the first axial side of the bristles and axially beyond the free end of the cover plate to a flanged section, the flanged section being disposed at a distance from the free end of the cover plate and projecting radially inwardly beyond the free end of the cover plate so as to form an undercut between the flanged section, the free end of the cover plate, and the outer side surface, the flanged section having a free end that does not directly contact the cover plate, the bristles being fastened in the bristle housing between the inner side surface and the outer side surface. Support for this amendment may be found, for example, at Figures 4 and 5.

Applicants respectfully submit that the combination of Werner et al. and Nakamura et al. does not disclose, or even suggest a brush seal with a cover plate having an outer side surface arranged on a first axial side of the bristles and an axial section that extends axially from the outer side surface in an axial direction away from the bristles to a free end **disposed on the first axial side of the bristles**, a supporting plate having an inner side surface arranged on a second axial side of the bristles opposite the first axial side, and a circumferential section that extends from the inner side surface in the axial direction from the second axial side of the bristles to the first axial side of the bristles and axially beyond the free end of the cover plate to a flanged section, **the flanged section spaced apart from the free end of the cover plate** and projecting radially inwardly beyond the free end of the cover plate so as to form **an undercut between the flanged section, the free end, and the outer side surface, the flanged section having a free end that does not directly contact the cover plate**. Therefore, it is respectfully submitted that the combination of Werner et al. and Nakamura et al. does not disclose, or even suggest, all of the features recited in claim 17. Accordingly, Applicants respectfully submit that the combination of Werner et al. and Nakamura et al. does not render unpatentable claim 17.

In view of the foregoing, withdrawal of the present rejection is respectfully requested.

**VII. Conclusion**

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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